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NOTICE OF ALLOWANCE AND FEE(S) DUE

30678

7590

12/11/2009

CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20006

EXAMINER				
AJAYI, JOEL				
ART UNIT	PAPER NUMBER			
2617				

DATE MAILED: 12/11/2009

APPLICATION NO. FILING DATE		FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,545	09/12/2003	Arto Palin	27592-00431-US	6422

TITLE OF INVENTION: METHOD AND SYSTEM FOR PROCESSING ACKNOWLEDGMENTS IN A WIRELESS COMMUNICATIONS NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	03/11/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

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SUITE 1100 WASHINGTON, DC 20006		2617 DATE MAILED: 12/11/200	9	

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 876 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 876 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 (571)-272-4200.

	Application No.	Applicant(s)	
	10/000 545		
Notice of Allowability	10/660,545 Examiner	PALIN ET AL. Art Unit	
•	1051 1111	0047	
	JOEL AJAYI	2617	
The MAILING DATE of this communication appears All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIOF of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED or other appropriate comm GHTS . This application is	n this application. If not include unication will be mailed in due of	d ourse. THIS
1. \boxtimes This communication is responsive to <u>the communication re</u>	ceived on November 04, 2	<u>009</u> .	
2. The allowed claim(s) is/are <u>1,3-11,13,15-17 and 19-24</u> .			
3. Acknowledgment is made of a claim for foreign priority ur	nder 35 U.S.C. § 119(a)-(d)	or (f).	
a) All b) Some* c) None of the:			
 Certified copies of the priority documents have 	been received.		
Certified copies of the priority documents have	been received in Applicati	on No	
Copies of the certified copies of the priority do	cuments have been receive	ed in this national stage applicati	on from the
International Bureau (PCT Rule 17.2(a)).			
* Certified copies not received:			
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		e a reply complying with the requ	uirements
4. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give			OTICE OF
5. CORRECTED DRAWINGS (as "replacement sheets") mus	st be submitted.		
(a) ☐ including changes required by the Notice of Draftspers	on's Patent Drawing Revie	w (PTO-948) attached	
1) 🔲 hereto or 2) 🔲 to Paper No./Mail Date	•		
(b) ☐ including changes required by the attached Examiner's Paper No./Mail Date	s Amendment / Comment o	r in the Office action of	
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in t			back) of
6. DEPOSIT OF and/or INFORMATION about the depo attached Examiner's comment regarding REQUIREMENT			ote the
Attachment(s) 1. ☐ Notice of References Cited (PTO-892)	5 ☐ Notice of I	nformal Patent Application	
 Notice of References Cited (PTO-092) Dotice of Draftperson's Patent Drawing Review (PTO-948) 		Summary (PTO-413),	
	Paper No	/Mail Date	
3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date	7. 🛛 Examiner's	Amendment/Comment	
Examiner's Comment Regarding Requirement for Deposit of Biological Material	8. 🛛 Examiner's	Statement of Reasons for Allow	vance
	9. 🔲 Other	<u></u> .	

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey Gluck (Reg. No. 44,457) on November 19, 2009.

The application has been amended as follows:

1. (Currently Amended) A method of controlling a multicast transmission, comprising: transmitting a data packet to a plurality of devices across an ultra wideband (UWB) wireless network;

detecting the reception of any acknowledgement transmissions, wherein each acknowledgement transmission indicates reception of the data packet by a respective one of the plurality of devices;

generating a correlation signal based on correlating received signals with a predetermined acknowledgment sequence;

retransmitting the data packet to at least one of the plurality of devices when an acknowledgement is not detected for each of the plurality of devices;

counting the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of devices; and

foregoing forgoing retransmission of the data packet when said number of consecutive times exceeds a first predetermined threshold and when the correlation signal fails to exceed a second predetermined threshold during each of a plurality of time slots allocated to respective ones of the plurality of devices detecting step detects an acknowledgement transmission from the each of the plurality devices except for said particular device.

2. (Cancelled).

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3. (Previously Presented) The method of claim 1, wherein the detecting comprises receiving said any acknowledgement transmissions from the UWB wireless network.

- 4. (Previously Presented) The method of claim 1, wherein the detecting comprises receiving said any acknowledgement transmissions from a transmission media different than the UWB wireless network.
- 5. (Original) The method of claim 4, wherein the different transmission media comprises Bluetooth.
- 6. (Currently Amended) The method of claim 1, wherein generating the correlation signal the detecting comprises correlating received signals with [[a]] the predetermined acknowledgement sequence during a time slot allocated to the devices for acknowledgement transmission.
- 7. (Currently Amended) The method of claim 6, wherein the detecting further comprises: generating a correlation signal from the predetermined acknowledgement sequence and received transmissions; and

counting the number of times the correlation signal exceeds a predetermined threshold.

- 8. (Previously Presented) The method of claim 7, wherein said counting is performed during a time division multiple access (TDMA) time slot allocated to upstream transmissions from the plurality of devices.
- 9. (Previously Presented) The method of claim 7, wherein the retransmitting comprises retransmitting the data packet when the number of times the correlation signal exceeds the predetermined threshold is less than the number of the plurality of devices.

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10. (Currently Amended) The method of claim 6, wherein the <u>time slots comprise</u> detecting further comprises:

generating a correlation signal from the predetermined acknowledgement sequence and received transmissions; and

determining whether the correlation signal exceeds a predetermined threshold during each of a plurality of time division multiple access (TDMA) time slots, wherein each of the TDMA time slots are allocated to respective ones of the plurality of devices.

11. (Previously Presented) The method of claim 10, wherein the retransmitting comprises retransmitting the data packet when the correlation signal fails to exceed the predetermined threshold during each of the plurality of time division multiple access (TDMA) time slots.

12. (Cancelled)

- 13. (Currently Amended) A wireless communications device, comprising:
- a transmission buffer configured to store a packet for transmission across an ultra wideband (UWB) wireless network to a plurality of devices;
- a retransmission buffer configured to store a retransmission packet, the retransmission packet being previously transmitted across the UWB wireless network; and
- a retransmission controller configured to receive one or more acknowledgement transmissions from the plurality of devices,

wherein the wireless communications device is configured to count the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of devices; [[and]]

to generate a correlation signal based on correlating received signals with a predetermined acknowledgment sequence; and

to <u>forego</u> retransmission of the data packet when said number of consecutive times exceeds a predetermined threshold and when <u>the correlation signal fails to exceed a second</u> <u>predetermined threshold during each of a plurality of time slots allocated to respective ones of</u>

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the plurality of devices an acknowledgement transmission from the each of plurality devices except for said particular device is detected.

14. (Cancelled)

15. (Original) The wireless communications device of claim 13, wherein said acknowledgement transmissions are received from a transmission media different then the UWB wireless network.

- 16. (Previously Presented) The wireless communications device of claim 15, wherein said the different transmission media comprises Bluetooth.
- 17. (Currently Amended) A system for controlling a multicast transmission, comprising: means for transmitting a data packet to a plurality of devices across an ultra wideband (UWB) wireless network;

means for detecting the reception of any acknowledgement transmissions, wherein each acknowledgement transmission indicates reception of the data packet by a respective one of the plurality of devices;

means for generating a correlation signal based on correlating received signals with a predetermined acknowledgment sequence;

means for retransmitting the data packet to the one or more devices when an acknowledgement is not detected for each of the one or more devices;

means for counting the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of devices; and

means for <u>forgoing</u> retransmission of the data packet when said number of consecutive times exceeds a predetermined threshold and when the correlation signal fails to exceed a second predetermined threshold during each of a plurality of time slots allocated to respective ones of the plurality of devices said means for detecting detects an acknowledgement transmission from the each of the plurality devices except for said particular device.

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18. (Cancelled)

19. (Original) The system of claim 17, further comprising means for receiving said any acknowledgement transmissions from a transmission media different than the UWB wireless network.

- 20. (Original) The system of claim 19, wherein the different transmission media comprises Bluetooth.
- 21. (Currently Amended) A computer-readable medium encoded with processing instructions for implementing <u>operations for a method of controlling multicast transmission</u>, performed by a wireless communication device, the <u>operations method</u> comprising:

transmitting a data packet to a plurality of devices across an ultra wideband (UWB) wireless network;

detecting the reception of any acknowledgement transmissions, wherein each acknowledgement transmission indicates reception of the data packet by a respective one of the plurality of devices;

generating a correlation signal based on correlating received signals with a predetermined acknowledgment sequence; [[and]]

retransmitting the data packet to at least one of the plurality of devices when an acknowledgement is not detected for each of the plurality of devices;

counting the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of devices; and

foregoing forgoing retransmission of the data packet when said number of consecutive times exceeds a predetermined threshold and when the <u>correlation signal fails to exceed a second predetermined threshold during each of a plurality of time slots allocated to respective ones of the plurality of devices detecting step detects an acknowledgement transmission from the each of the plurality devices except for said particular device.</u>

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22. (Currently Amended) The computer-readable medium of claim 21, wherein the detecting [[step]] comprises receiving said any acknowledgement transmissions from a transmission media different than the UWB wireless network.

- 23. (Previously Presented) The computer-readable medium of claim 22, wherein the different transmission media comprises Bluetooth.
- 24. (Previously Presented) The wireless communications device of claim 13, wherein the retransmission controller is further configured to cause the retransmission buffer to send the retransmission packet to the plurality of devices across the UWB wireless network when an acknowledgement is not detected for each of the plurality of devices.

REASON FOR ALLOWANCE

Allowable Subject Matter

Claims 1, 3-11, 13, 15-17 and 19-24 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art of record, Rosen, is an exemplary reference that closely approximates the applicant's invention. Rosen discloses an acknowledgement sequence that includes retransmission and a retransmission limit or threshold. However Rosen does not disclose a method of controlling a multicast transmission, comprising: transmitting a data packet to a plurality of devices across an ultra wideband (UWB) wireless network; detecting the reception of any acknowledgement transmissions, wherein each acknowledgement transmission indicates reception of the data packet by a respective one of the plurality of devices; generating a correlation signal based on correlating received signals with a predetermined acknowledgment sequence; retransmitting the data packet to at least one of the plurality of devices when an acknowledgement is not detected for each of the plurality of devices; counting the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of devices; and forgoing retransmission of the data packet when said number of

consecutive times exceeds a first predetermined threshold and when the correlation signal fails to exceed a second predetermined threshold during each of a plurality of time slots allocated to respective ones of the plurality of devices.

Conclusion

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joel Ajayi whose telephone number is (571) 270-1091. The Examiner can normally be reached on Monday-Friday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Joel Ajayi/

Examiner, Art Unit 2617

/NICK CORSARO/

Supervisory Patent Examiner, Art Unit 2617